Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A system, comprising:

a first processor that executes a transaction targeting a pre-determined address;

a second processor coupled to said first processor; and

a wait unit coupled to said first and second processors, said wait unit detects said pre-determined address and asserts a wait signal to cause said first processor to enter a wait mode, and said wait unit de-asserts the wait signal upon detection of a signal from said second processor.

2.   (Original) The system of claim 1 wherein the wait signal is de-asserted to permit the first processor to retrieve a status of the second processor.

3.   (Original) The system of claim 2 wherein said status includes one or more instructions that the first processor is to execute.

4.   (Original) The system of claim 1 wherein said transaction comprises a read instruction.

5.   (Original) The system of claim 1 wherein said transaction comprises a write instruction.

6.   (Original) The system of claim 1 wherein said wait unit de-asserts the wait signal upon detection of a system interrupt signal generated by the first processor.

7.   (Canceled)

8.   (Original) The system of claim 7 wherein said wait unit upon detection of said signal asserts a processor interrupt signal to the first processor if the wait signal is already de-asserted.

9.   (Currently Amended) A method, comprising:

executing a transaction that targets a pre-determined address;

detecting the transaction to said pre-determined address;

asserting a wait signal upon detection of the transaction to cause a processor to stall;

causing said wait signal to de-assert upon ~~occurrence of an event~~ receiving a signal from another processor, said de-assert controlled by logic external to said processor.

10.   (Original) The method of claim 9 wherein said stall comprises a low power mode.

11.   (Original) The method of claim 9 wherein said event comprises a system interrupt.

12.   (Canceled)

13.   (Original) The method of claim 9 wherein said transaction is a read instruction to said pre-determined address.

14.   (Original) The method of claim 9 wherein said transaction is a write instruction to said pre-determined address.

15.   (Currently Amended) A wait unit, comprising:

a decode logic unit that determines when a first processor runs a transaction to a pre-determined address;

a first processor interface;

a second processor interface; and

logic coupled to the decode logic unit, the first processor interface, and the second processor interface, ~~wherein~~ said logic asserts a signal propagated by the first processor interface to cause said first processor to stall; and

said second processor interface receives a wait release signal from a second processor that causes the wait unit to de-assert the wait signal to said first processor through said first processor interface.

16.   (Original) The wait unit of claim 15 wherein said transaction is a read instruction.

17.   (Original) The wait unit of claim 15 wherein said transaction is a write instruction.

18.   (Canceled)

19.   (Original) The wait unit of claim 18 wherein said wait release signal causes a processor interrupt signal to be asserted if the wait signal is already de-asserted.

20.   (Original) The wait unit of claim 15 further comprising a system interrupt interface coupled to the logic, through which a system interrupt signal is received that causes the logic to de-assert said wait signal to said first processor through the first processor interface.

21.   (Currently Amended) A system, comprising:

a first processor;

a second processor;

means for detecting a transaction targeting a pre-determined address and for asserting a wait signal to said first processor to cause the first processor to enter a wait state; and

means for releasing said first processor from the wait state by a wait release signal from said second processor.

22.   (Original) The system of claim 21 wherein the transaction comprises a memory read.

23.   (Original) The system of claim 21 wherein the transaction comprises a memory write.

24.   (Currently Amended) The system of claim 21 wherein said means for releasing said first processor from the wait state comprises a wait release signal from said second processor coupled to a wait unit, said wait unit de-asserts the wait signal upon detection of the wait release signal.

25.   (Original) The system of claim 21 wherein said means for releasing said first processor from the wait state comprises a system interrupt signal to a wait unit, said wait unit de-asserts the wait signal upon detection of the system interrupt signal.